Food Security Early Warning System

Agromet Update

2019/2020 Agricultural Season

Issue 05 Month: March **Season: 2019-2020** **14-04-2020**

Highlights

- **A four-week dry spell started in late February in central and eastern parts of the region, marking an early end of the rainfall season.**
- **The early cessation of rains caused premature wilting of many late-planted crops, which were previously in good condition after favourable January and February rainfall. Improvements in grazing conditions and river and dam levels may also be limited in some areas due to the early end of seasonal rains.**
- **Poor seasonal rainfall distribution has negatively affected harvest prospects in many southern parts of the region. In contrast, favourable conditions conducive for cropping have prevailed over parts of South Africa, Malawi, Tanzania and Zambia.**
- **Heavy rains caused flooding and destruction of crop fields in north-eastern parts of the region. In other areas, occasional flash flooding also impacted some crop fields to a lesser extent.**

Regional Summary

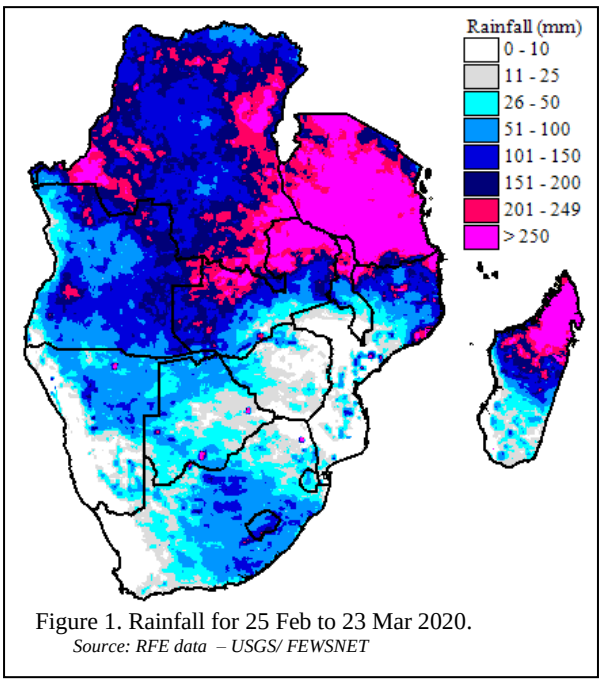

Figure 1. Rainfall for 25 Feb to 23 Mar 2020.
Source: RFE data – USGS/ FEWSNET

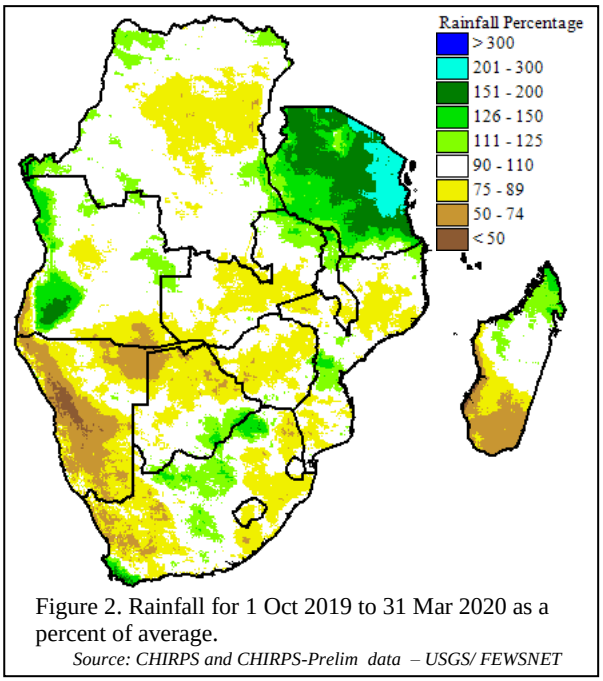

Figure 2. Rainfall for 1 Oct 2019 to 31 Mar 2020 as a percent of average.
Source: CHIRPS and CHIRPS-Prelim data – USGS/ FEWSNET

After favourable rainfall fell across most parts of the region for much of February, a four-week dry spell ensued across the central and eastern parts of the region. From late February to late March, little to no rainfall was received in most parts of central and eastern Botswana, southern Madagascar, southern Malawi, southern and central Mozambique, northern South Africa, southern and central Zambia, and most of Zimbabwe (Figure 1). The first half of this dry spell was accompanied by below average temperatures across most parts of the region, which helped to reduce the rates of evapotranspiration, and delayed wilting. Temperatures eventually increased, causing higher evapotranspiration rates, and negative impacts of the four-week dry spell on crops were reported for some areas. These areas include parts of southern Malawi, central Zambia and much of Zimbabwe. Crops reported to have been most affected by the dry spell were the later planted crops, while some early planted crops reportedly reached maturity before the dry conditions set in, and moderate yields are

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expected for these early-planted crops. The level of impact of the dry spell will therefore be partially determined by the proportions of late planted crops versus early planted crops in the areas where the recent dry spell was most severe.

The long dry spell in central and eastern parts of the region has continued through to the period that the rainfall season typically starts to wind down. Given that short term forecasts are also suggesting below average rains through to mid-April, this potentially represents an early cessation of rains. Analysis that was reported on in the February SADC Agrometeorological Update had indicated that good rains would be required through to the end of the rainfall season, typically in March/April, in order to support the late-planted crops until maturity; to promote regrowth of pastures that had been affected by several years of poor rains; and to improve the refilling of low dam, river and ground-water levels. The early cessation of rains experienced this season therefore means that the potential improvements noted in the February report are now unlikely to occur.

The latest dry spell comes on the backdrop of a generally erratic and unfavourable rainfall season in many areas. The October 2019 to March 2020 period received below average rainfall in several parts of the region (Figure 2). In particular, the October-to-December 2019 period was one of the driest since 1981 in many central and southern areas, which dryness was associated with erratic and late onset of rains in many areas. This erratic onset led to below average area planted, poor germination, and early wilting in central and southern parts of the region. This was followed by a 3-week dry spell during the December-January period across much of Zimbabwe and southern Mozambique, leading to further wilting of crops.

Apart from the dryness in the central and eastern parts of the region, a number of other areas have also been affected by dry conditions. These include Lesotho, where an extensively late onset of rains resulted in below average cropped area, and southern Madagascar where extended periods of low rainfall have resulted in wilting of crops and drought conditions. The area around southern Angola and northern Namibia has also received well below average seasonal rainfall, as has much of western, central and southern Angola.

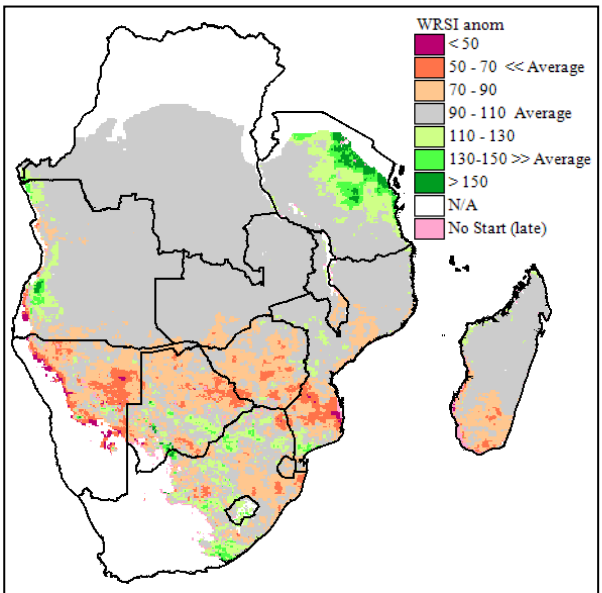

Figure 3. Estimated end-of-season Water requirements satisfaction index (WRSI) as percent of median
Source: USGS/ FEWSNET

The generally low amounts of poorly distributed rainfall in many areas resulted in below average water requirements satisfaction index (WRSI) values across much of the region (Figure 3). This implies that the rainfall distribution likely resulted in moisture deficits that negatively affected crop yields more severely than usual. Areas potentially affected include parts of southern Angola, eastern and northern Botswana, parts of Eswatini, southern Madagascar, southern Malawi, parts of southern and central Mozambique, northern Namibia, some central and eastern parts of South Africa, southern Zambia, and much of Zimbabwe. In some of the central areas, the late planted crops were more severely affected due to the early cessation of the rains. The erratic rainfall conditions early in the season also caused poor performance for some of the earlier planted crops in some areas.

The water catchment area that feeds into the Kariba dam is located in the central part of the region covering parts of Angola, Botswana, Namibia, Zambia and Zimbabwe. Much of this area received below average total seasonal rainfall. Consequentially, water recharge to the Kariba dam has been low this season. Since 2019, Kariba dam water levels have been extremely low, and this resulted in rolling power cuts of between 4 and 18 hours per day in Zambia and Zimbabwe last season. Given the low dam recharge, power cuts are likely to continue, which is likely to negatively affect crop irrigation during the winter season, particularly for winter wheat.

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The generally dry conditions in several parts of the region this season, and in the past few seasons, have also affected pasture availability. Reduction in quality of pasture, and atypically numbers of high drought-related livestock deaths were noted in several countries this season including Angola, Botswana, Lesotho, Namibia and Zimbabwe.

Several areas were affected by excessive rains and flooding between December and March, including parts of Angola, DRC, Madagascar, Malawi, Mozambique, Tanzania and Zambia. Some of the floods resulted in loss of lives, displacement of populations, destruction of infrastructure, and washing away of crops. While destructive in the flood-affected areas, the high rainfall was generally beneficial for cropping in surrounding areas. In northern DRC, over 50 percent of crops were lost to flooding in some areas, and the extent of flooding has resulted in below average production in some north-eastern parts of the country.

Despite the unfavourable rainfall that has affected many parts of the region this season, a number of areas have also experienced good rainfall conducive to crop development. These include some northern and central parts of Malawi, central South Africa, and much of Zambia.

Recommendations

Preliminary reports and analysis of agrometeorology and satellite data have highlighted several areas in the region where seasonal rainfall performance has already negatively affected harvest prospects. These remote methods typically provide a preliminary indication, and ground conditions are usually confirmed by detailed national field assessments that provide crop yield and production estimates annually. Field assessments also give an indication of the impacts of the harvest outcomes on household-level food insecurity and vulnerability. Restrictions on movement and social distancing movements that have been necessitated by the outbreak of the COVID-19 pandemic will however likely impact the feasibility and practicality of the crop and vulnerability assessments. Despite this limitation, information on crop harvest outcomes and household-level food insecurity remains critical for national level planning and interventions. In light of this, national agencies involved in crop assessments and food security monitoring in the Member States will need to upscale the usage of technological, remote, mobile monitoring-based assessments in order to meet the information gaps that may arise.

With the high certainty that significant populations have been negatively impacted by seasonal rainfall patterns, national assessments need to be urgently concluded, thus facilitating regional synthesis of food insecurity assessments. Based on the conclusions regarding the assessed household food security deficits and regional food availability, appropriate recommendations can be implemented to secure food security in the region.

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